

AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions, listings, of claims in the application:

Listing of Claims:

1. A system ~~unified framework~~ for visually displaying real-time enterprise status information over all levels of a corporate organizational structure of an enterprise, comprising:

an application integration platform that receives a plurality ~~plural types~~ of data types from manufacturing and information systems within said enterprise, said application integration platform analyzing said plurality ~~plural types~~ of data types to determine key performance indicators;

a process control server that receives manufacturing data from at least one work center and forwards said manufacturing data to said application integration platform;

a database containing information related to manufacturing processes performed at said at least one work center; and

a graphical user interface that interfaces with said application integration platform to provide a visual display of said key performance indicators in accordance with a ~~the~~ class of user interacting therewith,

wherein said levels of said corporate organizational structure are modeled as real world objects having methods and variables, said objects being created using an organizational hierarchical structure of said enterprise to be monitored together with respective states and behaviors of components within each level of said corporate structure.

2. The system recited in claim 1, wherein said key performance indicators include at least one of: throughput time, manufacturing hours, work center utilization, man-hour capacity, planned vs. actual hours for work orders, and work in process.

3. The system recited in claim 1, wherein said key performance indicators are determined in accordance with at least one of a work order number, a work station identifier, a start time, an end time, an activity code, a problem code, employee information, a material code, a planned start time, and a planned completion time.

4. The system recited in claim 1, wherein objects modeling respective components of a first part of said corporate structure are reusable to model components of a second part of said corporate structure.

5. The system recited in claim 1, wherein the classes of users include managers, engineers, and operators.

6. The system recited in claim 1, wherein one class of users is provided financial and manufacturing key performance indicators, wherein a second class of users is provided analysis capabilities, and a third class of users is provided key performance indicators for a supervised area and scheduling information.

7. A system for visually displaying real-time enterprise status information over all levels of a corporate organizational structure of an enterprise, comprising:

an object-oriented real world model of levels of said corporate organizational structure, said objects having methods and variables and being created using an organizational hierarchical structure of said enterprise such that respective states and behaviors of components within each level of said corporate structure are monitored together;

an application integration platform that receives plural types of data from manufacturing and information systems within an enterprise via a network infrastructure and analyzes said plural types of data in response to user inputs;

a process control server that receives manufacturing data from at least one work center and forwards said manufacturing data to said application integration platform;

a database containing information related to manufacturing processes performed at said at least one work center; and

a user interface that displays the analyzed plural types of data to determine key performance indicators,

wherein said at least one work center contains manufacturing machines, and a controller that receives sensor data from said machines and communicates said sensor data to said process control server.

8. The system of claim 7, wherein objects modeling respective components of a first part of said corporate structure are reusable to model components of a second part of said corporate structure.

9. The system recited in claim 7, wherein different instances ~~ones~~ of said key performance indicators are presented to different classes of users interacting with said management system.

10. The system recited in claim 7, wherein said key performance indicators include at least one of: throughput time, manufacturing hours, work center utilization, man-hour capacity, planned vs. actual hours for work orders, and work in process.

11. The system recited in claim 10, wherein said key performance indicators are selected by classes ~~said classes~~ of users and determined in accordance with at least one of a work order number, a work station identifier, a start time, an end time, an activity code, a problem code, employee information, a material code, a planned start time, and a planned completion time.

12. The system recited in claim 11, wherein the classes of users include managers, engineers, and operators.

13. The system recited in claim 12, wherein one class of users is provided financial and manufacturing key performance indicators, wherein a second class of users is provided analysis capabilities, and a third class of users is provided key performance indicators for a supervised area and scheduling information.

14. In a method ~~system~~ for providing information over all levels of a corporate organizational structure, a method of visually displaying real-time enterprise management information, said method comprising:

obtaining manufacturing data from at least one work center having at least one manufacturing machine, wherein said at least one work center and said manufacturing machine are modeled as objects having methods and variables, said objects using an organizational hierarchy of said at least one work center and said manufacturing machine such that respective states and behaviors are monitored together;

storing said manufacturing data in a database containing information related to manufacturing processes performed at said at least one work center;

analyzing said manufacturing data to determine key performance indicators; and
presenting differing ones of said key performance indicators to different classes of end users in accordance with user-selected input parameters.

15. The method of claim 14, wherein said key performance indicators include at least one of: throughput time, manufacturing hours, work center utilization, man-hour capacity, planned vs. actual hours for work orders, and work in process.

16. The method of claim 14, wherein said key performance indicators are determined in accordance with a selection of at least one of a work order number, a work station identifier, a start time, an end time, an activity code, a problem code, employee information, a material code, a planned start time, and a planned completion time.

17. The method of claim 14, wherein one class of users is provided financial and manufacturing key performance indicators, wherein a second class of users is provided analysis capabilities, and a third class of users is provided key performance indicators for a supervised area and scheduling information.